Appl. No.: 10/782,096

Amdt. Dated July 31, 2008

Reply to Office Action of May 20, 2008

Amendments to the Claims:

a)

1. (Currently Amended) An isolated nucleic acid molecule selected from the group

consisting of:

a nucleic acid molecule comprising the nucleotide sequence of SEQ ID

NO:1, 3, or 5;

b) a nucleic acid molecule comprising a nucleotide sequence having at least

90% sequence identity to the nucleotide sequence of SEO ID NO:1, 3, or 5, wherein said

nucleotide sequence encodes a polypeptide having pesticidal coleopteran, heteropteran, or

lepidopteran activity;

a nucleic acid molecule which encodes a polypeptide comprising the c)

amino acid sequence of SEQ ID NO:2, 4, or 6; and,

a nucleic acid molecule comprising a nucleotide sequence encoding a d)

polypeptide having at least 90% amino acid sequence identity to the amino acid sequence of

SEQ ID NO:2, 4, or 6, wherein said polypeptide has pesticidal coleopteran, heteropteran, or

lepidopteran activity.

2. (Previously Presented) The isolated nucleic acid molecule of claim 1, wherein

said nucleotide sequence is a synthetic sequence that has been designed for expression in a plant.

3. (Previously Presented) The nucleic acid molecule of claim 2, wherein said

synthetic sequence has an increased GC content relative to the GC content of SEQ ID NO:1, 3,

or 5.

(Original) A vector comprising the nucleic acid molecule of claim 1. 4.

5. (Original) The vector of claim 4, further comprising a nucleic acid molecule

encoding a heterologous polypeptide.

2 of 15

Appl. No.: 10/782,096

Amdt. Dated July 31, 2008

Reply to Office Action of May 20, 2008

6. (Original) A host cell that contains the vector of claim 4.

7. (Original) The host cell of claim 6 that is a bacterial host cell.

8. (Original) The host cell of claim 6 that is a plant cell.

9. (Original) A transgenic plant comprising the host cell of claim 8.

10. (Original) The transgenic plant of claim 9, wherein said plant is selected from the group consisting of maize, sorghum, wheat, sunflower, tomato, crucifers, peppers, potato, cotton, rice, soybean, sugarbeet, sugarcane, tobacco, barley, and oilseed rape.

11. (Previously Presented) A transgenic seed comprising the nucleic acid molecule of claim 1.

12-18. (Canceled)

19. (Currently Amended) A method for producing a polypeptide with pesticidal coleopteran, lepidopteran, or heteropteran activity, the method comprising culturing the host cell of claim 6 under conditions in which the nucleic acid molecule encoding the polypeptide is expressed.

20-21. (Canceled)

22. (Currently Amended) A plant having stably incorporated into its genome a DNA construct comprising a nucleotide sequence that encodes a protein having pesticidal activity, wherein said nucleotide sequence is selected from the group consisting of:

Appl. No.: 10/782,096 Amdt. Dated July 31, 2008

Reply to Office Action of May 20, 2008

- a) the nucleotide sequence of SEQ ID NO:1, 3, or 5;
- b) a nucleotide sequence having at least 90% sequence identity to the nucleotide sequence of SEQ ID NO:1, 3, or 5, wherein said nucleotide sequence encodes a polypeptide having pesticidal coleopteran, heteropteran, or lepidopteran activity;
- c) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2, 4, or 6; and,
- d) a nucleotide sequence encoding a polypeptide having at least 90% amino acid sequence identity to the amino acid sequence of SEQ ID NO:2, 4, or 6, wherein said polypeptide has pesticidal coleopteran, heteropteran, or lepidopteran activity;

wherein said nucleotide sequence is operably linked to a promoter that drives expression of a coding sequence in a plant cell.

- 23. (Currently Amended) A plant cell having stably incorporated into its genome a DNA construct comprising a nucleotide sequence that encodes a protein having pesticidal activity, wherein said nucleotide sequence is selected from the group consisting of:
  - a) the nucleotide sequence of SEQ ID NO:1, 3, or 5;
- b) a nucleotide sequence having at least 90% sequence identity to the nucleotide sequence of SEQ ID NO:1, 3, or 5, wherein said nucleotide sequence encodes a polypeptide having pesticidal coleopteran, heteropteran, or lepidopteran activity;
- c) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2, 4, or 6; and,
- d) a nucleotide sequence encoding a polypeptide having at least 90% amino acid sequence identity to the amino acid sequence of SEQ ID NO:2, 4, or 6, wherein said polypeptide has pesticidal coleopteran, heteropteran, or lepidopteran activity;

wherein said nucleotide sequence is operably linked to a promoter that drives expression of a coding sequence in a plant cell.

Appl. No.: 10/782,096 Amdt. Dated July 31, 2008

Reply to Office Action of May 20, 2008

- 24. (Currently Amended) The nucleic acid molecule of claim 1, wherein said nucleic acid molecule is selected from the group consisting of:
- a) a nucleic acid molecule comprising a nucleotide sequence having at least 95% sequence identity to the nucleotide sequence of SEQ ID NO:1, 3, or 5, wherein said nucleotide sequence encodes a polypeptide having pesticidal coleopteran, heteropteran, or lepidopteran activity; and,
- b) a nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:2, 4, or 6, wherein said polypeptide has pesticidal coleopteran, heteropteran, or lepidopteran activity.
- 25. (Currently Amended) The plant of claim 22, wherein said nucleotide sequence is selected from the group consisting of:
- a) a nucleotide sequence having at least 95% sequence identity to the nucleotide sequence of SEQ ID NO:1, 3, or 5, wherein said nucleotide sequence encodes a polypeptide having pesticidal coleopteran, heteropteran, or lepidopteran activity; and,
- b) a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:2, 4, or 6, wherein said polypeptide has pesticidal coleopteran, heteropteran, or lepidopteran activity.
- 26. (Currently Amended) The plant cell of claim 23, wherein said nucleotide sequence is selected from the group consisting of:
- a) a nucleotide sequence having at least 95% sequence identity to the nucleotide sequence of SEQ ID NO:1, 3, or 5, wherein said nucleotide sequence encodes a polypeptide having pesticidal coleopteran, heteropteran, or lepidopteran activity; and,
- b) a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:2, 4, or 6, wherein said polypeptide has pesticidal coleopteran, heteropteran, or lepidopteran activity.